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09/857,495	06/28/2001	Shinichi Yamada	057250903	5364
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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			YU, GINA C	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/857,495  
Filing Date: June 28, 2001  
Appellant(s): YAMADA ET AL.

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MARK SWEET  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed June 22, 2006 appealing from the Office action mailed May 24, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,110,450	BERGMANN	08-2000
5,198,210	GRITCHLEY et al.	03-1993
6,312,674 B1	MAUBRU	11-2001

6,120,757	DUBIEF et al.	09-2000
5,587,155	OCHIAI et al.	12-1996

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**A. Claims 19, 20, 27-33, 52-54, 61, 56-58, 64-66, 69, 72-76, 79 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergmann (US 6110450) in view of Critchley et al. (US 5198210) ("Critchley").**

The broadest claim in the instant case claims a liquid composition comprising at least one ceramide, at least one liquid fatty alcohol, and at least one cationic surfactant in a cosmetically acceptable medium, wherein the at least one fatty alcohol contains "no more than one hydroxyl group". While the claim requires at least one liquid fatty alcohol with only one hydroxyl group in the composition, examiner construes the claim in such a way that it does not exclude the presence of liquid fatty alcohols with more than one hydroxyl groups. See MPEP § 2111.03. Examiner takes such position since the specification does not support excluding diols or triols from the composition. See In re Grasselli, 713 F.2d 731, 218 USPQ 769 (Fed. Cir. 1983).

Bergmann teaches a hair care composition comprising at least one ceramide and/or glycosphingolipid in a cosmetically acceptable medium. See abstract. Example 2 shows an aqueous formulation comprising oleoyldihydrosphingosine, cationic surfactants (components 1 and 4), and additives. The reference teaches using 0.001-1 % of phytantriol, which is a liquid fatty alcohol, with 0.001-1 % of ceramides. See col. 7, lines 39-45. The preparation of the example composition is also disclosed. See instant claims 57 and 58. Cationic surfactants are taught in col. 6, lines 27 – 34. The reference teaches the application of the composition in permanent hair waving composition. See col. 7, lines 19 – 26. The methods for treating and protecting hair in instant claims 64, 65, 74, and 75 are obvious use of the prior art composition.

While Bergmann teaches formulations comprising cetyl and stearyl alcohols, which are solid, the reference fails to teach liquid fatty alcohols having one hydroxyl group.

Critchley teaches cosmetic compositions for skin, hair and nails which contains synthetic ceramides and emollients such as isocetyl alcohol, stearyl alcohol and cetyl alcohol. See col. 1, line 11 – col. 6, line 51; col. 10, lines 44 – 61. The reference suggests the equivalence of these alcohols which are well known emollients in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions of Bergmann by substituting the stearyl alcohol and cetyl alcohol with isocetyl alcohol, as motivated by Critchley, because 1) all references are directed to hair care compositions; 2) Critchley teaches the use of isocetyl alcohol with ceramides; and 3) Critchley teaches the equivalence of

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isocetyl alcohol with those fatty alcohols used in Bergmann. The skilled artisan would have combined the references in expectation of successfully producing hair care products with similar emolliency effects.

**B. Claims 21-26, 34, 59, 60, 67, 68, and 77-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergmann and Critchley as applied to claims 19, 20, 27-33, 52-54, 56-58, 61, 64-66, 69, 72-76, 79, and 82 as above, and further in view of Maubru (US 6312674 B1).**

Bergmann and Critchley fail to teach the specific ceramides of instant claims.

Maubru teaches oxidizing composition for bleaching or permanent reshaping hair, wherein the composition comprises ceramides disclosed in col. 3, line 21 – col. 16, line 13 in order to limit or prevent “deterioration in the mechanical properties of the hair”, particularly breaking of the hair and to obtain beautiful curls that withstand blow-drying and have good hold”. See col. 1, line 38 – col. 2, line 10. The reference specifically teaches bis(N-hydroxyethyl-N-cetyl)malonamide and 2-N-oleoylaminoctadecane-1,3-diol. See col. 5, lines 1 – 16. See instant claims 25-29. It is noted that oxidizing composition is used in “fixing step” in the permanent waving/straightening process. See col. 1, lines 1-29. Adding cationic polymers as a cosmetic additive is also suggested. See col. 5, lines 54 – 58; instant claim 19, 57, 64, and 74. The reference further teaches that the invention may contain other additives that are “known for their use in oxidizing compositions for bleaching or permanent reshaping of the hair”, and that the invention may be modified in the form of shampoo. See col. 5, lines 44 – 49. The

claimed process of treating is necessarily practiced when the composition is used according to the teaching in the prior art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions of the combined references by adding the ceramides of Maubru in the oxidizing bleaching or permanent waving compositions as motivated by Maubru because 1) both Bergman and Maubru teach using ceramides in oxidizing bleaching or permanently reshaping compositions; and 2) Bergmann teaches that the specific ceramides therein limits and prevents breaking of hair and damage due to blow-drying, and produces beautiful curls. The skilled artisan would have been motivated to combine the references in expectation of successfully producing oxidizing bleaching or permanent reshaping compositions with good hair protection.

**C. Claims 35-51, 62, 63, 70, 71, 80, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergmann, Critchley, and Maubru as applied to claims 19-34, 52-54, 56-61, 64-69, 72-79, and 82 above, and further in view of Dubief et al. (US 6120757) ("Dubief").**

The combined references fail to teach the specific cationic surfactants of instant claims.

Dubief teaches aqueous dispersion comprising quaternary ammonium surfactants, which is useful for hair cosmetic compositions. See col. 4, line 51 – col. 6, line 2; see instant claims 35-51. The reference discloses that the invention can be used

in permanent waving or straightening products or for washing or rinsing. See col. 6, lines 50 – 58.

It is generally considered prima facie obvious to combine two compounds each of which is taught by the prior art to be useful for the same purpose, in order to form a composition which is to be used for the very same purpose. The idea for combining them flows logically from their having been used individually in the prior art. As shown by the recited teachings, the instant claims define nothing more than the concomitant use of hair care ingredients. It would follow that the recited claims define prima facie obvious subject matter. Cf. In re Kerkhoven, 626 F.2d 848, 205 USPQ 1069 (CCPA 1980).

In this case, given the general teaching in Maubru that conventional additives for oxidizing composition for hair can be employed, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have looked to the prior arts such as Dubief for specific additives such as fatty alcohol and quaternary ammonium surfactants. The motivation to combine the ingredients to successfully formulate a hair composition for topical application is found in the teachings the prior arts that these are old and well known for hair treatment purposes.

**D. Claims 35-51, 55, 62, 63, 70, 71, 80, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergmann and Critchley as applied to claims 19, 20, 27-33, 52-54, 56-58, 61, 64, 65, 69, 72-76, and 79 above, and further in view of Ochiai et al. (US 5587155) (“Ochiai”).**



Bergmann fails to teach 18-methyleicosanoic acid and quaternary ammonium cationic surfactants.

Ochiai teaches hair-conditioning composition comprising 18-methyleicosanoic acid. See Table 3; Example 7; col. 1, line 54 – col. 2, line 54. The reference teaches that the fatty acid prevents hair damage and adds resilience to the hair, and renders moisturizing and hair conditioning effects. See col. 7, lines 36 – col. 8, line 60 for the application of the invention, including shampoo and permanent waving compositions. Quaternary ammonium salts are taught in col. 3, line 36 – col. 5, line 51.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the Bergmann references by adding a well known hair conditioning ingredient such as 18-methyleicosanoic acid as motivated by Ochiai because of the expectation of successfully producing a hair care products with hair protection, moisturizing, and conditioning effects.

#### **(10) Response to Argument**

**A. Claims 19, 20, 27-33, 52-54, 56-58, 61, 64-66, 69, 72-76, 79, and 82 are properly rejected over Bergmann in view of Critchley, as the combined teachings of the references provide motivation to make the claimed invention.**

Appellants argue that the present rejection cites a “factually inaccurate” motivation to combine Bergmann and Critchley. Specifically, appellants assert that the teaching of Critchley is limited to the use of pseudoceramides which are chemically distinct from the ceramides of Bergmann.

Examiner respectfully disagrees, as Critchley teaches in col. 14, lines 25 – 30 that the pseudoceramides is combined with conventional ceramides or other ingredients well known to those skilled in the art to produce a liposomal dispersion. Thus, appellants' assertion that there is no reasonable expectation of success in combining Bergmann and Critchley due to the structural differences between ceramides and pseudoceramides is also unpersuasive.

Furthermore, the reference teaches that pseudoceramides are closely related to and mimic the natural ceramides of the skin and used to improve water barrier function of the stratum corneum, which indicates that pseudoceramides and ceramides are art-recognized functional equivalents. Appellants assert as though the grounds of the present invention is based on the degree of chemical similarities between the pseudoceramides and ceramides. The argument is unpersuasive because the rejection is based on the specific teaching in the reference that conventional ceramides and pseudoceramides are used interchangeably or concurrently for the same purpose of improving the condition of hair. Furthermore, since Critchley teaches using solid or liquid emollients (isocetyl alcohol) with the pseudoceramides, which are also combined with conventional ceramides, examiner is correct in stating that the reference teaches combining isocetyl alcohol with ceramides.

Appellants also assert that Critchley fails to teach the equivalence of isocetyl alcohol with those fatty alcohols used in Bergmann. Appellants reason that fatty alcohols such as cetyl alcohol is described as a mere optional conditioning agent, which is not the same term Critchley uses to describe fatty alcohols. Examiner respectfully

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points out that Critchley teaches a more specific function of fatty alcohols, i.e., as emollients, which would have motivated one of ordinary skill in the art to use those moisturizing agent to condition the hair. See Critchley, col. 10, lines 44-61. It is also noted that claim 1 of the present application is not limited to isocetyl alcohol alone, but to liquid fatty alcohol.

Appellants assert that Critchley teaches that cetyl alcohol and stearyl alcohols are examples of emollients that may be used as cosmetically acceptable vehicles other than water, which act as "dilutant, dispersant, or carrier" in combination with pseudoceramides. Examiner takes the position that the argument does not reflect what one of ordinary skill in the art would have learned from the combined teachings of the references. Critchley in fact teaches in col. 10, lines 39 – 40 teaches that either liquid or solid emollients are used as a vehicle other than water, and then goes on to teach in the immediately following sentence that these vehicles are used either "singly or as mixtures of one or more vehicles". From this teaching, a skilled artisan would have understood that solid or liquid fatty alcohols could be used interchangeably depending on the desired rheology of the composition. Also, examiner views that a skilled artisan would not have reasonably concluded that the use of these fatty alcohols is limited to mixing with pseudoceramides only. As discussed above, Critchley teaches that conventional ceramides are combined with pseudoceramides, and thus the routineer would found it obvious to mix cetyl alcohol, stearyl alcohol, and/or isocetyl alcohol in combination with pseudoceramides and/or ceramides to produce a hair cosmetic composition with hair conditioning effects.

Appellants also point out that there are other examples of emollients other than isocetyl alcohol, from which that a skilled artisan could have chosen. In response, examiner respectfully point out that the present rejection is based on the fact that liquid fatty alcohols and solid fatty alcohols are art-recognized functional equivalents. One of ordinary skill in the art would have reasonably expected that substituting one for the other to make the claimed invention would have rendered a similar hair conditioning effect.

Appellants also state that it is not clear why a skilled artisan would have chosen isocetyl alcohol, a liquid fatty acid, to replace stearyl or cetyl alcohol, which are solid. It is respectfully pointed out again that Critchley expressly teaches that either liquid or solid emollients are used, and appellants have not shown any unexpected results in making the hair composition with liquid fatty alcohols.

Appellants' assertion that Bergmann and Critchley neither teach nor suggest a liquid cosmetic composition is erroneous. In fact, Bergmann teaches in col. 7, lines 27 – 32 that the prior art hair cosmetic is formulated in the form of emulsions, dispersions, solutions, fluid or thickened liquids.

**B. Claims 21-26, 34, 59, 60, 67, 68, 77, and 78 are properly rejected over Bergmann in view of Critchley, and further in view of Maubru.**

Appellants argue that the ceramides of Bergmann and Critchley lack structural similarities and thus there would have been no motivation to further combine the teachings with Maubru. The argument is unpersuasive as discussed above. Critchley

specifically teaches that the pseudoceramides there can be combined with conventional ceramides.

**C. Claims 35-51, 62, 63, 70, 71, 80, and 81 are properly rejected over Bergmann in view of Critchley, and Maubru, and further in view of Dubief.**

Appellants assert that the rejection fails because there is no teaching in the reference that any of these compositions or compounds is “useful for the very same purposes”. Specifically, appellants argue that Critchley is preferably directed to skin care composition while Dubief teaches hair composition, and thus these two do not teach inventions that are used for the very same purposes. The statement is erroneous, as Critchley clearly indicates that the invention is directed to “human skin, hair and nails”. See abstract.

**D. Claims 35-51, 55, 62, 63, 70, 71, 80, and 81 are properly rejected over Bergman in view of Critchley, and further in view of Ochiai.**

Appellants argue that the composition of Bergmann and Critchley cannot be combined with Ochiai, since the latter requires aromatic alcohols. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Ochiai is cited to show that the use of 18-methyleicosanoic acid and quaternary ammonium cationic surfactants in hair cosmetic art is well known for the specific benefits of these ingredients. Whether the particular composition of Ochiai requires

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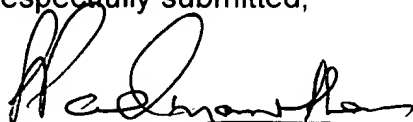
aromatic alcohol does not in any way affect the expectation that addition of 18-methyleicosanoic acid and quaternary ammonium cationic surfactants to Bergmann/Critchley composition would have improved the hair moisturizing and conditioning effects of the product.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

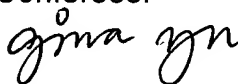
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



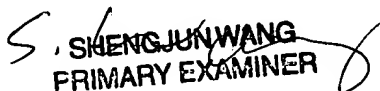
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